

REMARKS

Summary of Changes Made

This application was originally filed with 10 claims, which were canceled in a preliminary amendment that added claims 11-27. Claims 1-13, 15, and 27 were canceled, and claims 28-35 were added in previous amendments. Currently, claim 21 is amended to incorporate the subject matter of claim 14; claim 30 is amended to incorporate the subject matter of claim 28, and claim 34 is amended to incorporate the language of claim 32. Accordingly, claims 14, 16-26, and 28-35 (20 claims) remain pending. No new matter has been added by this amendment.

Claim Rejections - 35 U.S.C. §102(b) (Jacobs/Feygin)

The Examiner rejected claims 14, 16-20, 28, 29, 32, and 33 under 35 U.S.C. § 103(a) as being anticipated by Jacobs, EP 0,635,710 ("Jacobs"), in view of Feygin, U.S. Pat. No. 6,116,297, ("Feygin"), both newly cited. The Examiner contends that Jacobs teaches a sample dispenser **10** for the application of liquid samples with a sample volume to a sample absorbing area **6** with a sample dispenser body **10** having at its end a recess **7** bounded by a continuous edge, such that, when the recess **7** is dipped into a sample reservoir **38**, a droplet of liquid sample of predetermined size adheres to recess **7**. The Examiner contends that recess **7** has a shape selected from the group consisting of a hollow cone and a segmented hollow sphere, col. 6, lines 8-20; figs. 3A-5A.

With respect to claim 16-18, 29 and 33, the Examiner contends that the method of forming the device does not relate to the patentability of the device itself. Therefore, the limitations "polished" and "drilling" as recited in Claims 16-18 bear no patentable weight.

With respect to claims 19-20, the Examiner contends that recess **7** is a free end face of the sample dispenser body **10** in the form of an elongated body, figs. 3A-5A.

The Examiner admits that Jacobs fails to teach a sample volume of less than one microliter and a recess having a depth of less than 50% of its width. However, the Examiner contends that Feygin teaches a liquid dispenser such that the capillary channel is capable of retaining a liquid volume in the range of 0.5 to about 5 microliters, col. 3, lines 30-34.

With respect to sample volume, the Examiner contends that it would have been obvious to one of the ordinary skill in the art to modify the Jacobs device such that a sample volume of

less than one microliter is absorbed on to the sample absorbing area in order to obtain an amount suitable for precise and accurate analysis. With respect to the recess having a depth of less than 50% of its width, the Examiner contends that it would have been obvious to one of ordinary skill in the art to modify the Jacobs device such that the sample recess has a depth of less than 50% of its width in order to obtain desired amounts of liquid for analysis.

Applicants respectfully request reconsideration and withdrawal of the instant rejections. Applicants respectfully submit that the Examiner mischaracterizes the Jacobs patent. Applicants submit that Jacobs does not disclose a sample body having a recess in the shape of a hollow cone or a segmented hollow sphere.

From all cited text and figures of Jacobs (col. 6, lines 8-20; Figs 3A-5A), it should be clear that Jacobs discloses an apparatus including a transfer element **10** in the form of a plate, which forms a liquid-supporting portion **7** on the lower surface **6** of the transfer element. The liquid supporting portion **7** is defined by a series of substantially parallel V-shaped grooves **8**, which are disposed over the majority of the surface **6**. Grooves **8** may be varied in shape and depth and may be rectangular, convex, concave, U-shaped, etc. Liquid supporting portion **7** can also be fashioned without grooves, instead having a textured surface, col. 6, lines 21-23; Fig 2B.

Jacobs fails to disclose or suggest anything like a sample recess area having the shape of a hollow cone or a segmented hollow sphere. While their cross-sections may vary, the sample recess area of Jacobs includes grooves, which, in any configuration have a longitudinal aspect, and can in no way be equated with the instantly claimed features (hollow cone or segmented hollow sphere). Further, nothing in the Jacobs disclosure could be equated with a sample recess bounded by a continuous edge. Each groove has a separate edge, discontinuous from the others.

To address the admitted deficiencies of Jacobs, the Examiner cites Feygin only because it discloses a dispensing device comprising a capillary sample channel, which can contain a liquid volume of 0.5 to 5 microliters. The Examiner concludes that it would be obvious to combine the sample volume of Feygin with the overall disclosure of Jacobs thus defeating the patentability of the claimed invention.

A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 U.S.P.Q. 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984), MPEP § 2141.02. The mere fact that references can be combined or modified does not render the

resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430, 1433 (Fed. Cir. 1990). The level of skill in the art alone cannot be relied upon to provide the suggestion to combine references. *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 50 U.S.P.Q.2d 1161, 1171 (Fed. Cir. 1999).

In citing Feygin solely for disclosure of the sample volume, the Examiner may not ignore those portions of Feygin that expressly conflict with the teachings of the claimed invention. Applicant notes, for instance, the statement in the present application regarding problems of prior art sample dispensers using capillary sample dispensers (page 1, lines 15-24):

[I]t has been found that delivery of the sample amount held in the capillary involves considerable problems, since the absorbent material forming the sample absorbing area requires a very strong suction effect, otherwise residues of the sample liquid remain in the capillary. These sample dispensers with capillary are therefore usable only for special sample absorbing areas and it is also difficult to use such sample dispensers in an automated process which does not always involve a check as to whether or not the sample liquid held in the capillary is being completely transferred to the sample absorbing area.

It should be clear from the application that the present invention does not contemplate the inclusion of a sample dispenser including a capillary sample channel. The application contains further statements regarding the deficiencies and general undesirability of a capillary sample dispenser, e.g., p. 3, lines 20-26; p. 4, lines 5-9.

It is also notable that Feygin contemplates a complicated procedure to ensure full sample introduction and dispensation to and from the capillary sample channel as most succinctly disclosed in Figure 7. The liquid in the capillary is accelerated then decelerated. Upon such severe deceleration, the liquid in the capillary chamber is dispensed from a second region of the capillary channel and additional liquid is drawn into the first region of the capillary channel. The capillary channel is automatically and immediately refilled, paragraph bridging cols. 2-3. This is nothing like the presently claimed invention. This abrupt, high-speed movement would not be suitable for the types of automated processes for which the presently claimed invention is well-suited.

Applicants submit that the combination of Jacobs and Feygin is improper because nothing in the references teaches the desirability of their combination. Further, even when so combined, the Jacobs and Feygin references taken together fail to disclose all of the elements of the rejected claims. The combination of Feygin with Jacobs would result in a transfer element in the form of a plate having a number of capillary channels. Even Jacobs' title, "Method and

apparatus for **surface area** transfer” makes clear the incompatibility with the capillaries of Feygin. Jacobs relates to a transfer element having a relatively wide transfer area (i.e., a plurality of grooves) as noted in Figs. 5A and 7 (diameters D2, D3). The capillary dispenser of Feygin relates to an essentially pinpoint sample transfer “area.”

Accordingly, Applicants respectfully submit that claims 14, 16-20, 28, 29, 32 and 33 patentable over all cited references in any combination, and in condition for allowance.

Allowable Subject Matter

Applicants thank the Examiner for the indication that claims 21-26, 30, 31, 34, and 35 are drawn to allowable subject matter, and that they would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The Examiner admits that the prior art fails to teach a sample dispenser body having as its tip a cylindrical section.

The Examiner will note that claims 21, 28, and 32 have been amended to fully independent form. Given that the remaining allowable claims all depend from one of those three claims, Applicants respectfully submit that all of claims 21-26, 30, 31, 34, and 35 are in condition for allowance.


CONCLUSION

In light of the foregoing, it is respectfully submitted that the present application, including claims 14, 16 - 26, and 28 - 35 (20 claims) is in condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge the same to our Deposit Account No. 18-0160, our Order No. HUB-12804.

Respectfully submitted,

RANKIN, HILL, PORTER & CLARK LLP



Kenneth A. Clark
Reg. No. 32,119
Christopher J. Korff
Reg. No. 55,342

925 Euclid Avenue
Suite 700
Cleveland, Ohio 44115-1405
(216) 566-9700

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